SONY

Operation Software

BZS-7020A

Supplement 1
Software Version 5.10

English

Manual to be supplemented

BZS-7020A User's Guide
1st Edition
Software Version 5.00 and Later

Digital Video Switcher System

DVS-7300/7350 System

BZS-7020A (WW)
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This User's Guide describes additional functions and changes in Version 5.10 of the BZS-7020A Operation Software.
Use the pages of this supplement to replace the corresponding pages in your copy of the User's Guide.

Functions newly supported from BZS-7020A version 5.10

The following functions are newly supported from version 5.10 of the BZS-7020A Operation Software.

Function	See page
Wipes using a BKDS-7370 board	4-149
Still files operation using a BKDS-7444 board	6-18
Show key functions	14-41
VTR program play mode	14-65
MODE 3 (Switching the operating mode of the Flexipad)	14-78
Settings for manipulating the snapshot attributes in the Flexipad section	14-80

Menus accessed from a top menu button

Group	Button	Menus	Function	See page
M/E-1, M/E-2, M/E-3	KEY1, KEY2	M/E-1, -2, -3 KEY1 or KEY2	Key 1 and key 2 settings for the M/E bank	4-47
	WIPE	M/E-1, -2, -3 WIPE	Wipe settings for the M/E bank	4-102
	DME	M/E-1, -2, -3 DME WIPE	DME wipe settings for the M/E bank	4-130
	CHR KEY	M/E-1, -2, -3 CHROMA KEY	Chroma key settings for the M/E bank	5-4,5-18
	BKGD/ TRANS	M/E-1, -2, -3 BKGD/TRANS	Color background, transition limit and other settings for the M/E bank	4-140
SYSTEM	DSK	DSK1, 2, 3, 4	Settings for the four downstream keys[a]	4-72
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	P/P WIPE	PGM/PST WIPE	Wipe and color background settings for the PGM/PST bank[b]	4-115
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	STATS	STATUS	Displaying the status of each bank	4-143
	FRAME MEM 1, 2	FRAME MOMERY 1, 2	Settings for the two frame memories	6-6
	STILL FILE	STILL FILE	Settings for saving and recalling still images	6-18
	KEY FRAME	KEY FRAME	Key frame operation and editing	8-32
	REGS	REGISTER	Managing registers holding snapshots and other data	9-6
	DISK	DISK	Floppy disk operations	10-5
	MISC	MISC	Miscellaneous operations including control by external equipment, safe title display, the video process function, and the color correction function	12-2
	SETUP	SETUP	Setup functions	14-3
	DIAG	DIAGNOSIS	Displaying the board configuration and adjusting analog output signals	15-3
UTILITY	The buttons in this group access the menus assigned to them using a setup menu.			14-92

a) This function is only available in a 3.5-M/E system or a 3-M/E system equipped with a downstream keyer.
b) This function is only available in a 3.5-M/E system.

Menus accessed by pressing a button twice

For certain buttons other than the top menu buttons, pressing twice in rapid succession directly recalls a related menu. The following table lists these buttons, together with the menus they recall.

Items listed in parenthesis after the menu names are automatically selected when the menu is recalled. If no item is shown, the item you last selected in this menu is automatically selected.

Menus accessed by pressing a button twice

Button location	Buttons	Menus	See page
Transition control section of M/E-1, M/E-2, or M/E-3 bank	KEY1, KEY2	M/E-1, -2, -3 KEY1 or KEY2	4-47
	WIPE	M/E-1, -2, -3 WIPE	4-101
	DME	M/E-1, -2, -3 DME WIPE	4-130
	SUPER MIX	M/E-1, -2, -3 BKGD/TRANS (item 2: LIMIT/S-MIX)	4-20
Key control section of M/E-1, M/E-2, or M/E-3 bank	KEY1, KEY2	M/E-1, -2, -3 KEY1 or KEY2	4-47
	CHR	M/E-1, -2, -3 CHROMA KEY	5-4,5-18
	PTN	M/E-1, -2, -3 WIPE	4-101
	LUM, LIN, CLEAN	M/E-1, M/E-2, M/E-3 KEY 1 or KEY 2[a] (item 1: TYPE)	4-47
	AUTO SEL, SPLIT	M/E-1, M/E-2, M/E-3 KEY 1 or KEY 2[a] (item 2: FILL/SOURCE)	4-51
Transition control section of PGM/ PST bank (3.5-M/E panels)	DSK1, DSK2, DSK3, DSK4	DSK1, DSK2, DSK3, DSK4	4-72
	WIPE	PGM/PST WIPE	4-115
	DME	P/P DSK DME WIPE	4-133
Downstream keyer control section (3.5-M/E panels, and 3-M/E panels with a BKDS-7032 fitted)	DSK1, DSK2, DSK3, DSK4	DSK1, DSK2, DSK3, DSK4	4-72
	WIPE	DSK1, DSK2, DSK3 or DSK4 WIPE[b]	4-115
	DME	P/P DSK DME WIPE	4-132

a) The menu recalled depends on which of keyers 1 and 2 the key control section is delegated to.
b) The menu recalled depends on which of the downstream keys (DSK1 to DSK4) the downstream keyer control section is delegated to.

(Continued)

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Wipes Using a BKDS-7370 Board

This section describes the setting operations for carrying out wipes when the BKDS-7370 Advanced Wipe Board is installed.

Overview

A wipe is a transition in which the old video is replaced by the new video according to the progressively changing shape of a wipe pattern.
A wipe which forms a transition between two backgrounds is called a background wipe, and a wipe which inserts or removes a key is called a key wipe.

Wipe patterns

You can select a wipe pattern from the selection displayed in a menu.
The direction in which a wipe proceeds is indicated by the pattern: at an intermediate stage of the transition, the white portion represents the old video, and the black portion the new video. Alternatively, arrows indicate the direction in which some wipe patterns change. *(See the Appendix "Wipe Patterns" (page A-2)).*

The wipe patterns may be grouped together under the headings below.

Standard wipes: Patterns built from horizontal, vertical, and diagonal straight lines.
Enhanced wipes: Patterns including circles, stars, hearts, and round corners.
Rotary wipes: Patters for wipes rotating in the arrow direction about a particular point in the image.
Mosaic wipes: Patterns which break the image into small tiles.
Random/dust wipes: Random mosaic patterns, and diamond dust patterns.

Pattern mix

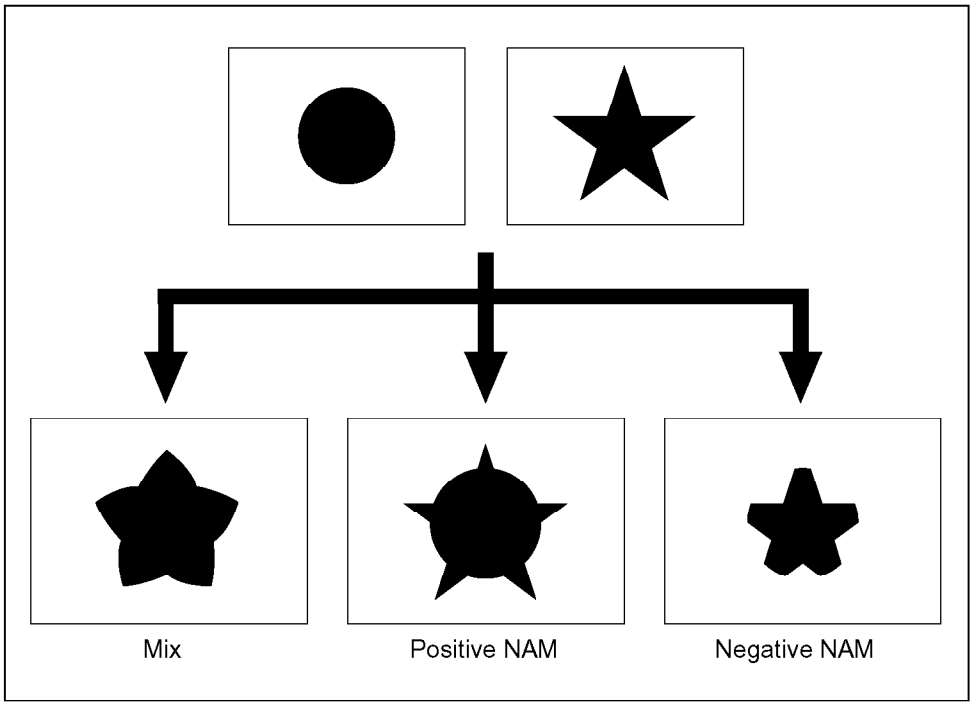
The term "pattern mix" refers to a new pattern formed by combining two selected wipe patterns (known as the "main" and "subsidiary" patterns). There are four different methods of combination, as follows.

Mix (MIX): The effect of the subsidiary pattern is added to the main pattern, modifying its appearance.

Positive non-additive mix (+NAM): The logical inclusive OR of the two patterns is used.

Negative non-additive mix (–NAM): The logical AND of the two patterns is used.

Morphing (MORPH): The pattern is transformed throughout the course of the transition, evolving from the main pattern, through the "mix" combination, to the subsidiary pattern.



To a pattern resulting from a "pattern mix", it is also possible to add ("mix") a diamond dust pattern (a "dust mix").

Note that if the pattern mix function is off, but the dust mix function is on, then the main pattern and the diamond dust pattern are combined. The result is the same as a pattern mix in which the diamond dust pattern is selected as the subsidiary pattern.

The following table shows whether you can use a particular combination of wipe patterns with the pattern mix function.

Wipe pattern used as the main pattern \ Wipe pattern used as the subsidiary pattern	Standard wipes	Enhanced wipes	Rotary wipes	Mosaic wipes	Random/ dust wipes
Standard wipes	Yes	Yes	No	Yes	Yes
Enhanced wipes	Yes	Yes	No	Yes	Yes
Rotary wipes	No	No	No	No	No
Mosaic wipes	Yes	Yes	No	No	Yes
Random/dust wipes	Yes	Yes	No	Yes	No

Main and subsidiary modifier link function

When carrying out a pattern mix, you can link the modifier settings for the main and subsidiary patterns. This function has two modes, as follows.

"FULL LINK" mode: All modifier settings for the main and subsidiary patterns are the same. Changing the modifier settings for either pattern automatically changes the settings for the other.

"SEMI LINK" mode: The modifier parameter values for the main and subsidiary patterns are linked, but each modifier can be switched on or off independently for the two patterns. If the parameter values of a particular modifier for the two patterns are different when you select this function, then the difference between the two values is preserved, so that changing the value for one pattern changes the value for the other pattern by the same amount.

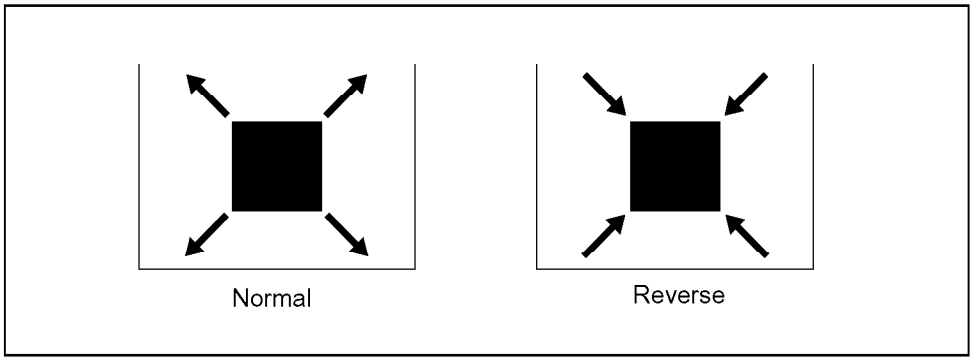
Note

When having carried out a pattern mix you execute a wipe, set the modifier link function to the "FULL LINK" mode. If this function is set to "OFF", or to the "SEMI LINK" mode, the desired video effect may not be obtained at the start or finish point of the transition.

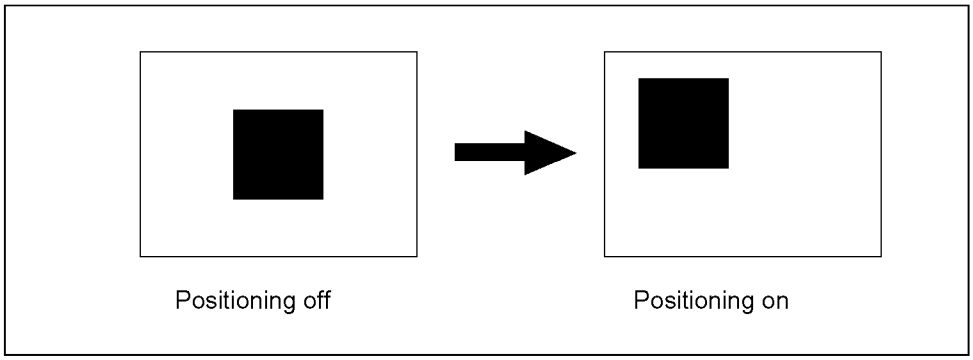
Modifying the wipe pattern

You can modify wipe patterns in the following ways. The block-capital expressions in parenthesis show how the modification is indicated on the menu screen.

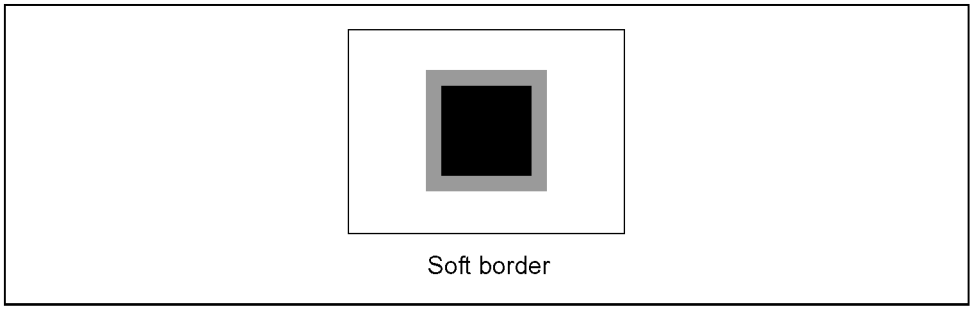
Wipe direction (DIRECTION): The wipe can proceed in the forward ("normal") direction, or the reverse direction. There is also an alternating option, in which the wipe direction reverses each time it is executed.



Pattern positioning (POSITIONER): When this function is enabled, you can alter the position of the pattern in video space.

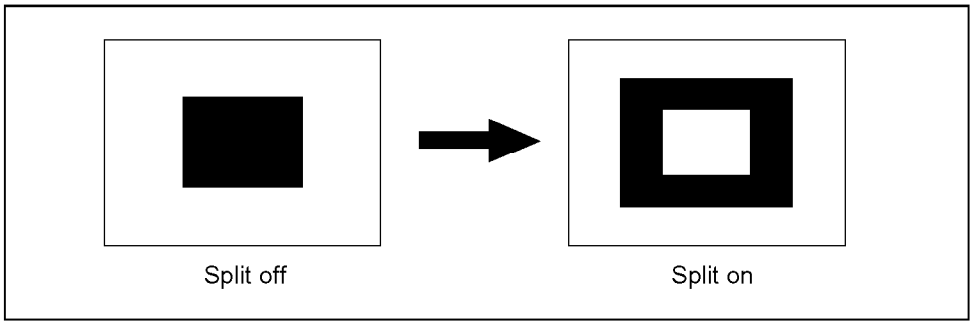


Edge modifications (EDGE): You can apply a border to the edge, or soften the edge. It is also possible to soften the applied border (soft border function).

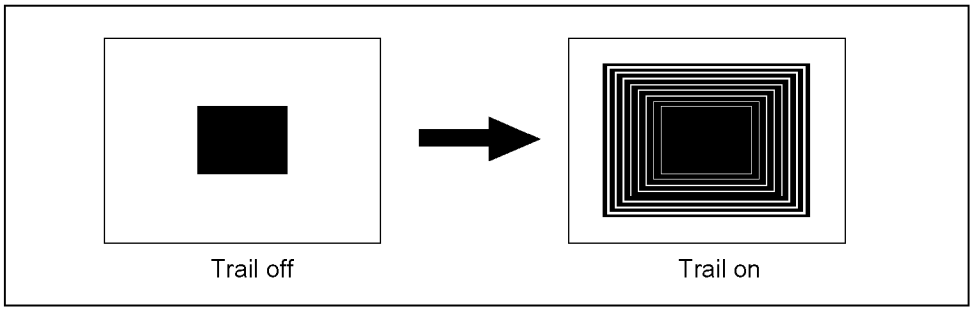


When you select a border or soft border, the signal which fills these border portions is termed edge fill.
For the edge fill signal, you can select either the dedicated color matte generator, or the signal on the utility bus. There are two mattes (1 and 2) and you can also select a combination (mix) of the two; this is called a "color mix".

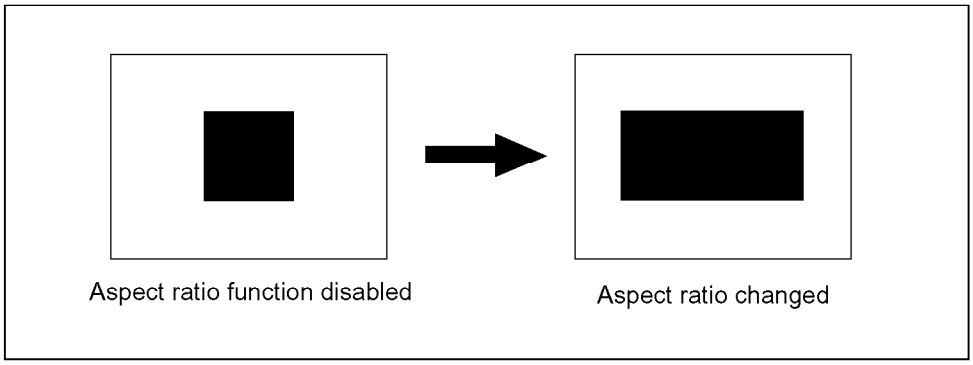
Split (SPLIT): The pattern is split, and separated parts move in opposite directions.



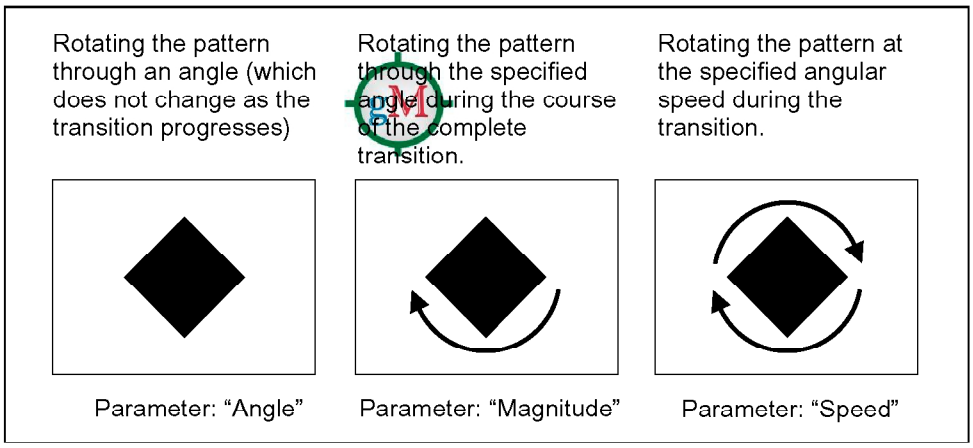
Trail (TRAIL): When the pattern changes, it leaves a trail.



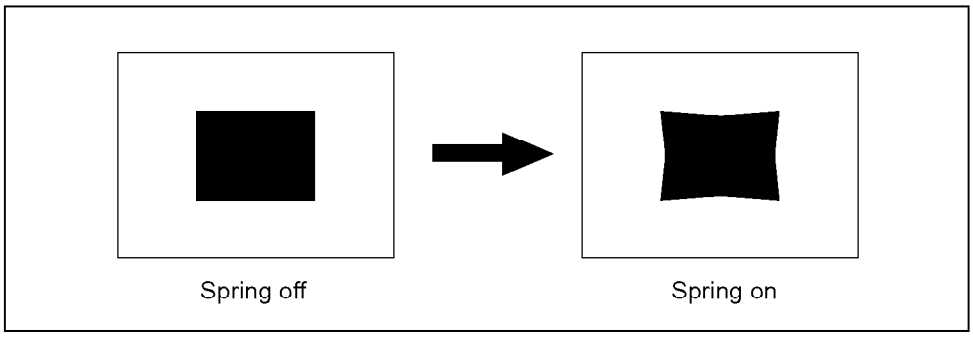
Changing the aspect ratio (ASPECT): This allows you to vary the aspect ratio of the pattern.



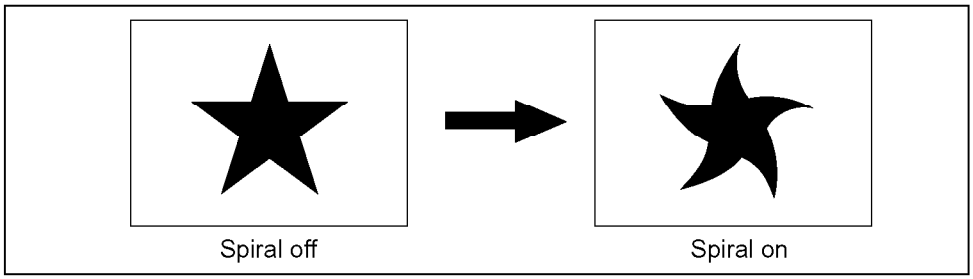
Pattern rotation (ROTATION): This rotates the pattern, in any of three ways. These are shown in the following figure, along with the names of the parameters used to control them.


Rotating the pattern through an angle (which does not change as the transition progresses)
Rotating the pattern through the specified angle during the course of the complete transition.
Rotating the pattern at the specified angular speed during the transition.
Parameter: "Angle"
Parameter: "Magnitude"
Parameter: "Speed"

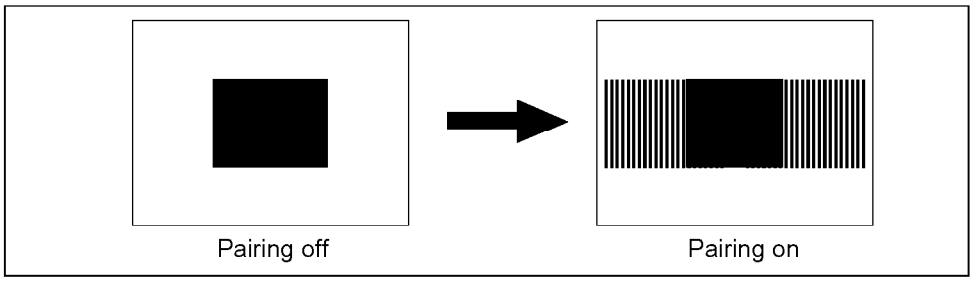
Spring (SPRING): As the transition progresses, the edges of the pattern are deformed inward or outward.



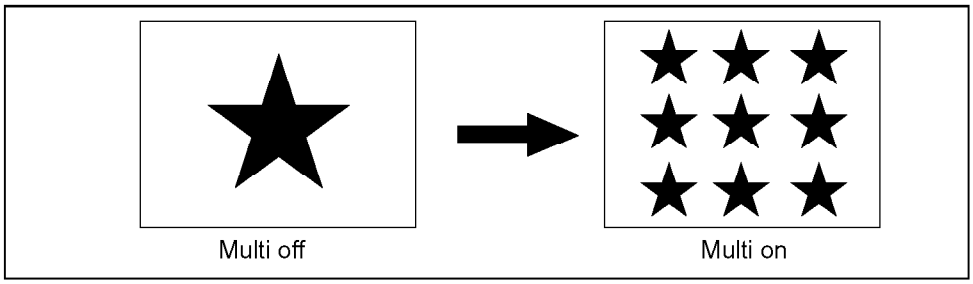
Spiral (SPIRAL): The pattern is deformed like a whirlpool.



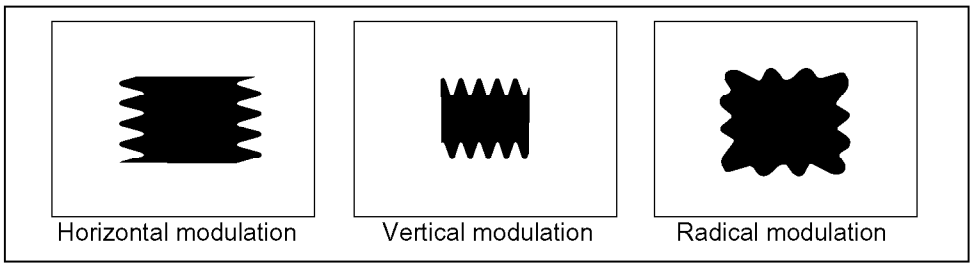
Pairing (PAIRING): The pattern is deformed like a venetian blind.



Replicated patterns (MULTI): This tiles the video space with multiple copies of the pattern, with a maximum of 63 copies in both horizontal and vertical directions. It is also possible to reverse alternate copies of the pattern, or change the position.



Modulation (H MODULATION, V MODULATION, FRINGE MODULATION): This modulates the pattern, applying a wavy effect to the edges, in the vertical, horizontal, or radial direction.



Combinations of patterns and modifiers

Depending on the pattern you have selected, not all modifiers may be usable. The following table shows which modification settings can be applied to which wipe patterns, with the wipe patterns arranged in groups by their numbers.

Pattern type	Standard wipes	Enhanced wipes	Rotary wipes	Mosaic wipes	Random/ dust wipes
Wipe pattern number	1 to 20, 22	21, 23, 24, 26, 27, 29, 49, and 300 to 304	100 to 107, 150, 151, 156, 158, 160, 162, 516, 518, 604, 606, 624, and 661	200 to 203, 206 to 213, 220 to 247, 250 to 257, and 260 to 269	270 to 274
Wipe direction	Yes	Yes	Yes	Yes	Yes
Pattern positioning [a)]	Yes other than 1 to 16, 19 and 20	Yes other than 300 to 303	Yes other than 100 to 103, 150, 151, 516, 518, 604, and 606	No	No
Edge modifications	Yes	Yes	Yes	Yes	Yes
Split effect	Yes	Yes	No	Yes	No
Trail effect	Yes	Yes	Yes	Yes	Yes
Aspect ratio [a)]	Yes other than 1 to 8, 17 and 18	Yes	No	No	No
Pattern rotation [a)]	Yes	Yes	Yes other than 100 to 103, 150, 151, 516, 518, 604, and 606	No	No
Spring effect [a)]	No	Yes	No	No	No
Spiral effect [a)]	No	Yes	No	No	No
Pairing effect [a)]	Yes other than 19 and 20	Yes	Yes	No	No
Replicated patterns [a)]	Yes	Yes	Yes	Yes	No
H- and V- modulations [a)]	Yes	Yes	Yes	No	No
Fringe modulations [a)]	No	Yes	No	No	No

a) You can apply these modifiers independently to the main and subsidiary patterns.

Basic Operation for Wipe Settings

Most wipe settings are carried out in a dedicated menu for the bank concerned.

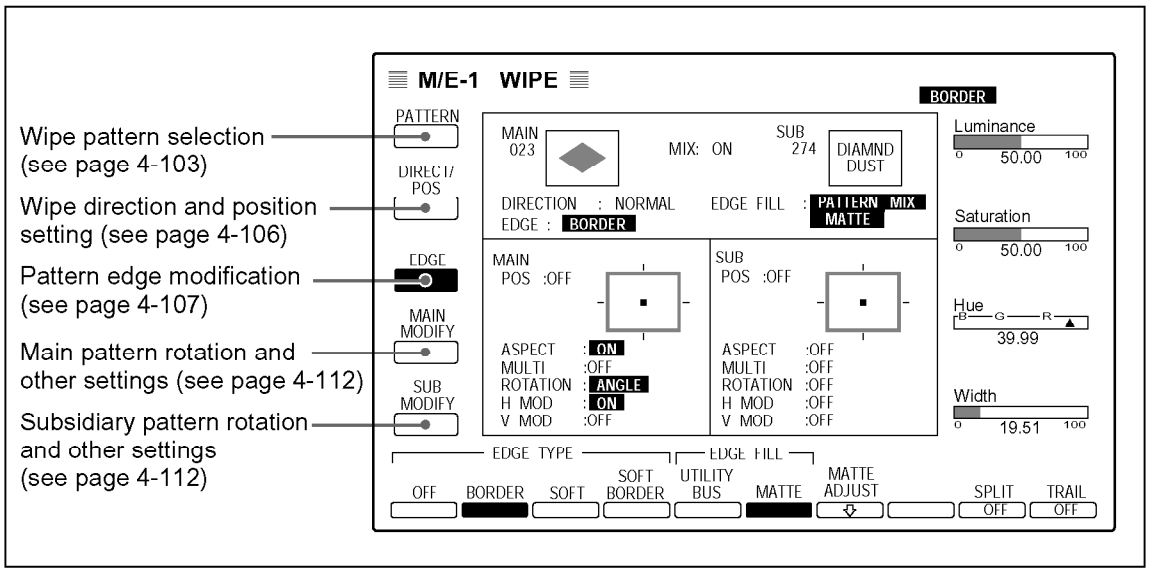
This section describes the basic operations for wipe settings for the M/E banks.

Accessing the wipe setting menus

For example, to access the M/E-1 WIPE 1 menu, use any of the following operations:

- In the M/E-1 group of the menu control section, press the WIPE top menu button.
- In the transition control section of the M/E-1 bank, press the WIPE button twice in rapid succession.

After any of these operations, the M/E-1 WIPE menu shown below appears. See the page indicated in parenthesis for more details of the settings.



Example M/E-1 WIPE menu display

The M/E-2 WIPE and M/E-3 WIPE menus are similar in appearance.

The following description always takes the M/E-1 WIPE menu as an example for basic wipe setting operations.

Selecting the wipe pattern

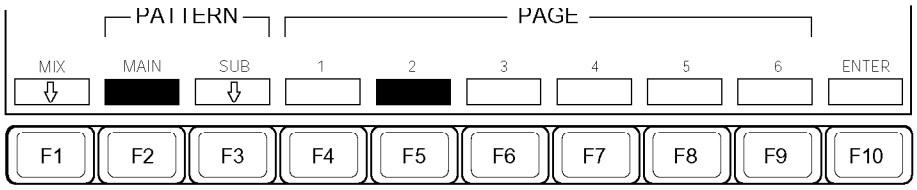
Move the cursor to select the required wipe pattern from those displayed on the menu screen. The wipe pattern display comprises six pages. Alternatively, you can enter the wipe pattern number directly using the numeric keypad.

For details of input from the numeric keypad, see page 4-162.

To select the wipe pattern for the M/E-1 bank, use the following procedure.

1 In the M/E-1 WIPE menu, select item 1 (PATTERN).

The PATTERN menu appears, and you can now select the main pattern.



Function key indications in the PATTERN menu

2 Press one of F4 (1) to F6 (9), turning it on, to display page 1 or page 2 of the wipe pattern display.

3 Use the cursor keys (↑ ↓ ← →) to select the required pattern.

4 Press F10 (ENTER).

The pattern you have selected appears on the screen in the "MAIN" area.

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5 Change the parameters, according to the selected pattern, to set the shape of the pattern.

When a polygon wipe (pattern number 49) is selected:

Knob	Parameter	Setting
1	No.	Number of points (3 to 64)
2	Star	Sharpness (0.00 to 100.00)

When a mosaic wipe (pattern numbers 200 to 203, 206 to 213, 224 to 247, 250 to 257, and 260 to 269) is selected:

Knob	Parameter	Setting
1	H TILE No.	Number of tiles horizontally (2 to 36)
2	V TILE No.	Number of tiles vertically (2 to 18)

When a random 4 wipe (pattern number 273) is selected:

Knob	Parameter	Setting
1	H size	Tile size in horizontal direction (0.00 to 100.00)
2	V size	Tile size in vertical direction (0.00 to 100.00)
3	Volatility	Rate of tile flashing (0.00 to 100.00)

When a diamond dust wipe (pattern number 274) is selected:

Knob	Parameter	Setting
1	H size	Particle size in horizontal direction (0.00 to 100.00)
2	V size	Particle size in vertical direction (0.00 to 100.00)
3	Flash rate	Rate of particle flashing (0.00 to 100.00)

When a karaoke pattern (pattern numbers 220 to 223) is selected:

Knob	Parameter	Setting
1	Start	Start position of pattern (0.00 to 100.00)
2	Row No.	Number of rows in wipe (1 to 36)
3	Phase	Phase step to next row (0.00 to 100.00)

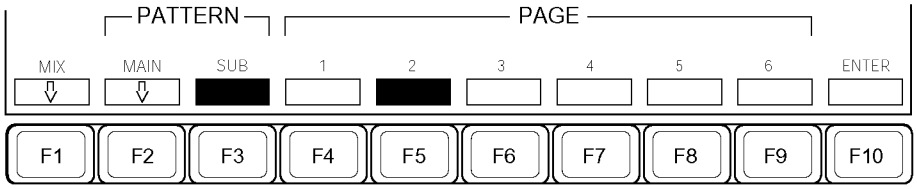
- If you are not going to use a pattern mix, this completes the wipe pattern selection.
- If you are going to use a pattern mix, continue with the procedure in the next section.

Combining two wipe patterns in a pattern mix

To combine the main pattern with the subsidiary pattern in a pattern mix, use the following procedure.

1 In the PATTERN menu, press F3 (SUB), turning it on.

You can now select the subsidiary pattern.



Function key indications in the PATTERN menu (after pressing F3)

2 Press one of F4 (1) to F9 (6), turning it on, to display page 1 or page 2 of the wipe pattern display.

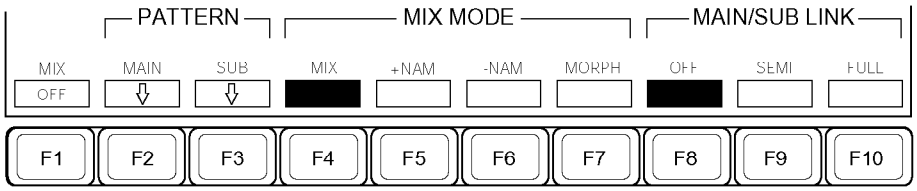
3 Use the cursor keys (↑ ↓ ← →) to select the required pattern, then press F10 (ENTER).
The subsidiary patterns selectable depend on the main pattern used.

For more information about the available main pattern and subsidiary pattern combinations, see page 4-151.

The pattern you have selected appears on the screen in the "SUB" area.

4 Press F1 (MIX).

The function key indications change as follows.



Function key indications in the PATTERN menu (after pressing F1)

5 Press F1 (MIX) once again, turning it on.

The main and subsidiary patterns are combined.

6 Press one of F4 to F7 to select the type of pattern combination.

F4 (MIX): Combine the main and subsidiary patterns by a "mix".
F5 (+NAM): Combine the main and subsidiary patterns by a "positive NAM".
F6 (–NAM): Combine the main and subsidiary patterns by a "negative NAM".
F7 (MORPH): Evolve through the course of the transition, from the main pattern, to the subsidiary pattern.

7 If necessary, adjust the "Mix" parameter.

When one of F4 to F6 is selected

Knob	Parameter	Setting
1	Mix	Degree to which subsidiary pattern is combined with main pattern (0.00 to 100.00)

When F7 is selected
Set the Start and End parameters. The start point of the transition corresponds to 0.00, and the end point to 100.

Knob	Parameter	Setting
1	Start	Position in transition when main pattern is 100% (–50.00 to +150.00)
2	End	Position in transition when subsidiary pattern is 100% (–50.00 to +150.00)

If you specify a negative value: When the transition starts, combining of the main and subsidiary patterns has already begun.
If you specify a value greater than 100: Combining of the main and subsidiary patterns is still continuing when the transition ends.
If the End value is more than the Start value: As the transition progresses, the change is from the subsidiary pattern to the main pattern.

(Continued)

8 Press one of F8 to F10, to set the main/subsidiary link function.

F8 (OFF): Do not use the link function.
F9 (SEMI): Select "SEMI LINK" mode.
F10 (FULL): Select "FULL LINK" mode.

Note
To carry out a wipe transition, select F10 (FULL).

Mixing a diamond dust wipe with a pattern created by a pattern mix ("dust mix")

Use the following procedure to create a "dust mix".

1 In the menu in step **4** in the previous procedure, hold down the SHIFT button (the indication above F1 changes to "DUST"), and press F1 (DUST).

2 Set the parameters, as required.

Knob	Parameter	Setting
1	Mix	Degree to which diamond dust pattern is mixed in (0.00 to 100.00)

Note
If you have one of pattern numbers 270 to 274 selected as the subsidiary pattern, and pattern mix set to "ON", then it is not possible to use a dust mix. (It is not possible to select "ON".)

Selecting a wipe pattern using the numeric keypad

To select a pattern by number using the numeric keypad, use the following procedure.
To check pattern numbers, consult the Appendix "Wipe Patterns" *(page A-2)*.

1 In the PATTERN menu, select F2 (MAIN) or F3 (SUB).

2 Enter the number of the required pattern, using the numeric keypad, then press the ENTER button.

The newly selected pattern now appears on the screen in the "MAIN" or "SUB" area.

Applying wipe modifiers

You can modify wipe patterns, for example to reverse the wipe direction, or change the position of the pattern. Note, however, that depending on the pattern you have selected, not all modifiers may be usable.

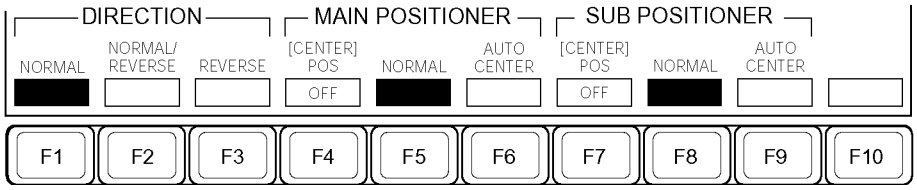
For details of possible combinations of wipe patterns and modifiers, see the table on page 4-156.

Selecting the wipe direction
Positioning the pattern

To apply these modifiers, use the following procedure.

1 In the M/E-1 WIPE menu, select item 2 (DIRECT/POS).

The DIRECT/POS menu appears.



Function key indications in the DIRECT/POS menu

2 To specify the wipe direction, press one of F1 through F3, turning it on.

F1 (NORMAL): Carry out the wipe in the forward direction.
F2 (NORMAL/REVERSE): Carry out alternate wipes in opposite directions.
F3 (REVERSE): Carry out the wipe in the reverse direction.

3 To position a pattern, press F4 (POS) for the main pattern, or F7 (POS) for the subsidiary pattern, turning it on, then adjust the parameters.

Knob	Parameter	Setting
1	H Pos	Set the horizontal position of the pattern (–50.00 to +50.00)
2	V Pos	Set the vertical position of the pattern (–50.000 to +50.00)

To return the pattern position to the center of the screen
Hold down the SHIFT button (the indications above F4 and F7 both change to "CENTER"), and press F4 (CENTER) or F7 (CENTER).

(Continued)

4 Press F5 or F6 (for the main pattern) or F8 or F9 (for the subsidiary pattern) to select whether or not the pattern moves toward the center as the transition progresses.

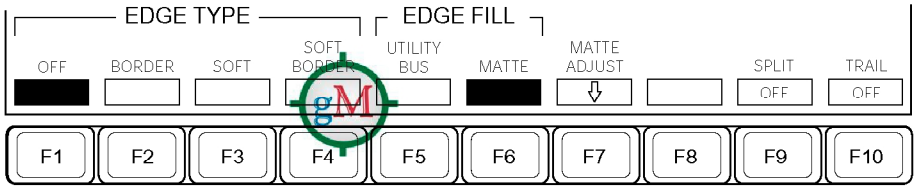
F5/F8 (NORMAL): The wipe pattern center is stationary throughout the transition.
F6/F9 (AUTO CENTER): As the transition progresses, the wipe pattern center moves toward the center of the video space.

Modifying the edge of the wipe pattern

To modify the edge of the wipe pattern, use the following procedure.

1 In the M/E-1 WIPE menu, select item 3 (EDGE).

The EDGE menu appears.



Function key indications in the EDGE menu

2 Press one of F1 through F4 to select the edge type.

F1 (OFF): unmodified edge.
F2 (BORDER): apply a border.
F3 (SOFT): soft edge.
F4 (SOFT BORDER): apply a soft border.

3 Adjust the parameter settings as necessary.
When you selected border or soft border in step **2**, when F6 (MATTE) is on (a color matte is selected as the edge fill), you can adjust the parameters for matte 1 regardless of whether the color mix function is on or off.

When applying a border:

Knob	Parameter	Setting
1	Luminance	Set luminance (0.00 to 100.00)
2	Saturation	Set saturation (0.00 to 100.00)
3	Hue	Set hue (0.00 to 359.99)
4	Width	Set width (0.00 to 100.00)

When applying a soft edge:

Knob	Parameter	Setting
1	Softness	Set the degree of edge softness (0.00 to 100.00)

When applying a soft border:

Knob	Parameter	Setting
1	Luminance	Set luminance (0.00 to 100.00)
2	Saturation	Set saturation (0.00 to 100.00)
3	Hue	Set hue (0.00 to 359.99)
4	Width	Set width (0.00 to 100.00)
1	Inner Soft	Inner edge softness of the border (0.00 to 100.00)
2	Outer Soft	Outer edge softness of the border (0.00 to 100.00)
4	Width	Set width (0.00 to 100.00)

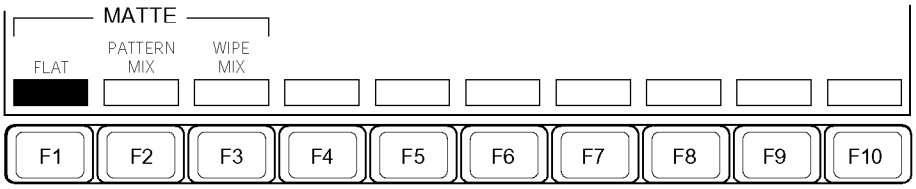
4 Press F5 or F6 to select the edge fill signal.

F5 (UTILITY BUS): signal selected on the utility bus.
To select the signal on the M/E-1 utility bus, press the M/E-1 UTIL button in the auxiliary delegation section, and select the cross-point button assigned to the required signal.
F6 (MATTE): dedicated color matte for edge fill.

(Continued)

5 When you selected a color matte as the edge fill signal, press F7 (MATTE ADJUST) to make the matte adjustments.

The EDGE MATTE menu appears.



Function key indications in the EDGE MATTE menu

6 If you do not wish to use the color mix function, press F1 (FLAT), turning it on, and set the parameters for matte 1.

Knob	Parameter	Setting
1	Luminance	Set luminance (0.00 to 100.00)
2	Saturation	Set saturation (0.00 to 100.00)
3	Hue	Set hue (0.00 to 359.99)

For details of the operations for using the color mix function, see the next section.

Using a color mix matte for the edge fill

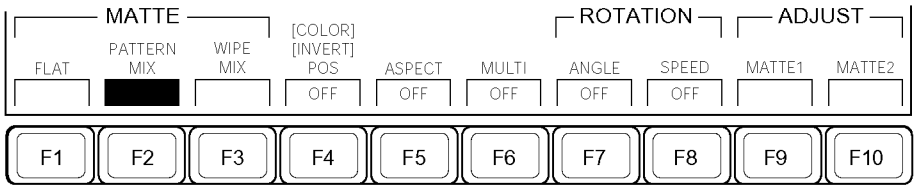
When you have selected a color matte as the edge fill signal for a border or soft border, you can combine mattes 1 and 2, using a pattern produced by the dedicated pattern generator or the wipe generator for the particular M/E bank. On the border of the pattern, the two mattes are mixed, forming a color gradation.

To carry out a color mix, use the following procedure.

When using a dedicated pattern:

1 In step **6** on the previous page, press F2 (PATTERN MIX), turning it on.

Function key indications appear for F4 through F10.



Function key indications in the EDGE MATTE menu (when F2 is selected)

2 to **4**

Basically same as steps **2** to **4** of the procedure described under "Using a color mix matte for the key edge fill" *(page 4-59)*.

5 To interchange matte 1 and matte 2, hold down the SHIFT button in the menu control section (the function key indication for F4 changes to "COLOR INVERT"), then press F4 (COLOR INVERT), turning it on.

When using a wipe pattern:

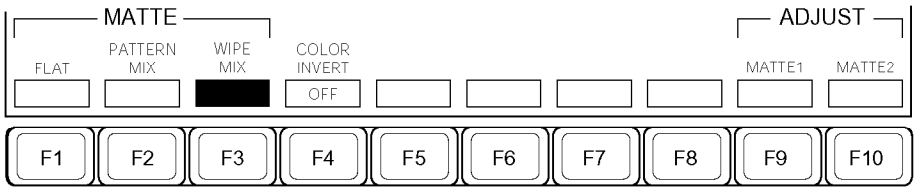
Note

When you select a wipe pattern for the color mix, the following wipe modifier settings become invalid.
• Direction
• Edge
• The "magnitude" setting for rotation

For details of the wipe modifiers, see page 4-152.

1 In step **6** of the procedure described above under "Modifying the edge of the wipe pattern" *(page 4-166)*, press F3 (WIPE MIX), turning it on.

Function key indications appear for F4, F9 and F10.



Function key indications in the EDGE MATTE menu (when F3 is selected)

2 Adjust the pattern parameters as required.

Knob	Parameter	Setting
1	Size	Set pattern size (0.00 to 100.00)
2	Softness	Set the degree of edge softness (0.00 to 100.00)

3 Adjust the colors for mattes 1 and 2.

To adjust matte 1 press F9 (MATTE 1), and to adjust matte 2 press F10 (MATTE 2), turning the respective button on, then adjust the parameters.

Knob	Parameter	Setting
1	Luminance	Set luminance (0.00 to 100.00)
2	Saturation	Set saturation (0.00 to 100.00)
3	Hue	Set hue (0.00 to 359.99)

4 To interchange matte 1 and matte 2, press F4 (COLOR INVERT), turning it on.

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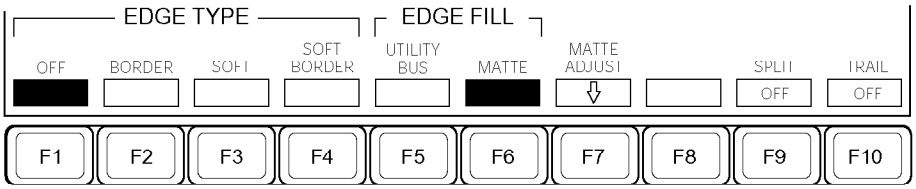
Splitting a wipe pattern
Leaving a trail behind a pattern

To apply these modifiers, use the following procedure.

1 Select item 3 (EDGE) in the M/E-1 WIPE menu.

The EDGE menu appears.



Function key indications in the EDGE menu

2 Depending on the modifiers you wish to apply, press F9 or F10, turning them on, and adjust the parameters.

F9 (SPLIT): Splitting a wipe pattern

Knob	Parameter	Setting
1	Split No.	Number of splits (integer, 1 to 4)
2	Spacing	Spacing between adjacent parts of the pattern (0.00 to 100.00)

F10 (TRAIL): Leaving a trail behind a pattern

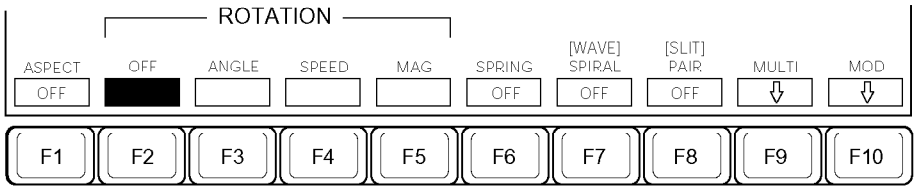
Knob	Parameter	Setting
1	Decay	Trail persistence time (0.00 to 100.00)

Changing the aspect ratio of the wipe pattern
Rotating the wipe pattern
Deforming the edges of a pattern inward or outward (SPRING)
Deforming the pattern like a whirlpool (SPIRAL)
Deforming the pattern like a venetian blind (PAIRING)
Replicating the wipe pattern
Applying a modulation to the edge of the wipe pattern

To apply these modifiers, use the following procedure.

1 • To apply the modifiers to the main pattern, in the M/E-1 WIPE menu, select F4 (MAIN MODIFY).
• To apply the modifiers to the subsidiary pattern, in the M/E-1 WIPE menu, select F5 (SUB MODIFY).

The MODIFY menu appears.



Function key indications in the MODIFY menu

2 Depending on the modifiers you wish to apply, press any of F1 through F8, turning them on, and adjust the parameters (When setting multiplication skip to step **3**, and when setting modulation skip to step **5**.).

F1 (ASPECT): Adjust the pattern aspect ratio.

Knob	Parameter	Setting
1	Aspect	Aspect ratio (0.00 to 100.00)

F2 (OFF): do not apply any of the rotation modifiers (ANGLE, SPEED, or MAGNITUDE).

F3 (ANGLE): Rotate the pattern.

Knob	Parameter	Setting
1	Angle	Rotation angle (–50.00 to +50.00) (maximum one whole turn)

F4 (SPEED): Rotate the pattern at a constant angular speed.

Knob	Parameter	Setting
1	Speed	Rotation speed (–50.00 to +50.00)

F5 (MAG): Specify angle through which pattern turns through the course of the transition.

Knob	Parameter	Setting
1	Angle	Pattern orientation when the transition starts (–50.00 to +50.00)
2	Magnitude	Rotation through transition (–100.00 to +100.00) (maximum plus or minus two whole turns)

F6 (SPRING): A wipe with deforming pattern edges inward or outward.

Knob	Parameter	Setting
1	Gain	Thickness (0.00 to 100.00)

F7 (SPIRAL): A wipe with a whirlpool-like effect.

Knob	Parameter	Setting
1	Magnitude	Size and direction of the whirlpool (0.00 to 100.00)

Giving the wipe a wavy appearance at a constant speed in the horizontal direction

Hold down the SHIFT button (the indication above F7 changes to "WAVE"), and press F7 (WAVE).

Knob	Parameter	Setting
2	Wave Speed	Horizontal speed of the wave (–50.00 to +50.00)

(Continued)

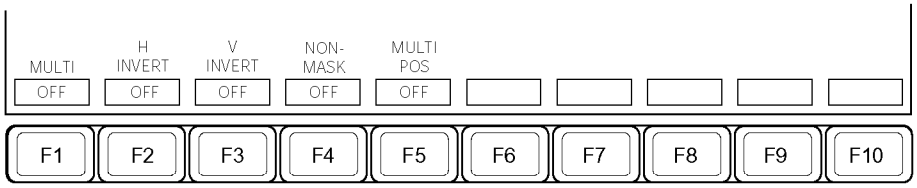
F8 (PAIR): Making the wipe like a venetian blind

Knob	Parameter	Setting
1	Width	Width of strips (1 to 128)
2	H Offset	Interval in the horizontal direction (–50.00 to +50.00)
3	V Offset	Interval in the vertical direction (–50.00 to +50.00)

Changing the slit direction
Hold down the SHIFT button (the indication above F8 changes to "SLIT"), and press F8 (SLIT). Select either of the following, to change the direction.
H DIR: Horizontal direction
V DIR: Vertical direction

3 Press F9 (MULTI).

The function key display changes as follows.



4 Press the function key corresponding to the modifier you want to apply, turning it on, and set the parameters.

F1 (MULTI): Use replicated patterns.

Knob	Parameter	Setting
1	H Multi	Number of pattern replications horizontally (1 to 63)
2	V Multi	Number of pattern replications vartically (1 to 63)
3	Shift	Position of even-numbered rows with respect to odd-numbered rows (–50.00 to +50.00)

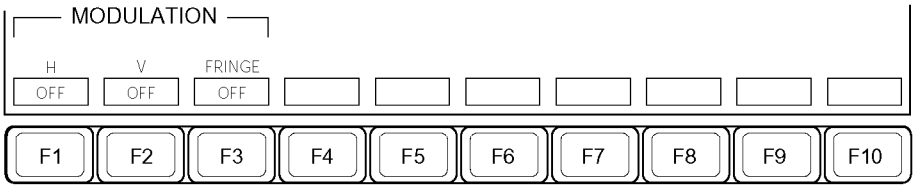
F2 (H INVERT): When this is set to ON, alternate copies of the pattern are reversed in the horizontal direction.
F3 (V INVERT): When this is set to ON, alternate copies of the pattern are reversed in the vertical direction.
F4 (NON-MASK): When this is set to ON, then even if you move the pattern with the positioner, an indefinite number of copies appear. (The wipe always occurs with the number of copies of the pattern specified with F1.)

F5 (MULTI POS): Move the position of the pattern within the region divided with F1.

Knob	Parameter	Setting
1	H Pos	Move the pattern horizontally (–50.00 to +50.00)
2	V Pos	Move the pattern vertically (–50.00 to +50.00)

5 Press F10 (MOD).

The function key display changes as follows.



6 Press the function key corresponding to the modifier you want to apply, turning it on, and set the parameters.

F1 (H): Modulate the pattern, giving a horizontal waviness to the edge.

Knob	Parameter	Setting
1	Amplitude	Set the modulation amplitude (0.00 to 100.00)
2	Frequency	Set the modulation frequency (0.00 to 100.00)
3	Speed	Set the modulation speed (–50.00 to +50.00)
4	Shape	Modulation waveform[a)] (1: sine wave, 2: triangular wave, 3: square wave)

a) If you change the modulation waveform for either of F1 (H) or F2 (V), the other setting automatically changes to reflect the new value.

F2 (V): Modulate the pattern, giving a vertical waviness to the edge.

Knob	Parameter	Setting
1	Amplitude	Set the modulation amplitude (0.00 to 100.00)
2	Frequency	Set the modulation frequency (0.00 to 100.00)
3	Speed	Set the modulation speed (–50.00 to +50.00)
4	Shape	Modulation waveform[a)] (1: sine wave, 2: triangular wave, 3: square wave)

a) If you change the modulation waveform for either of F1 (H) or F2 (V), the other setting automatically changes to reflect the new value.

(Continued)

F3 (FRINGE): Modulate the pattern, applying a wavy effect to the edges, in the radial direction.

Knob	Parameter	Setting
1	Amplitude	Set the modulation amplitude (0.00 to 100.00)
2	Frequency	Set the modulation frequency (0.00 to 100.00)
3	Speed	Set the modulation speed (–50.00 to +50.00)
4	Shape	Modulation waveform (1: sine wave, 2: triangular wave, 3: square wave)

Recalling the image before a memory was overwritten – UNDO

After overwriting the contents of memory with F1 (FREEZE) in MANUAL mode or F1 (PAINT) in PAINT mode, you can use the UNDO function to return to the previous state.
To carry out the UNDO function, hold down the SHIFT button (the indication above button 5 changes to "UNDO"), and press button 5 (UNDO).

Option

To use the UNDO function requires the BKDS-7444 Frame Memory Expansion Board.

Note

The UNDO function is common to frame memories 1 and 2. Therefore, the UNDO function only operates for the frame memory on which the most recent FREEZE or PAINT ON operation was carried out. The UNDO function is also disabled by carrying out a save or load operation in the STILL FILE menu.

For details of STILL FILE menu operations, see the next page.

STILL FILE

Overview

When the BKDS-7444 Frame Memory Expansion Board is installed, you can use the functions of the BKDS-2041 Frame Memory Board to save frozen images.

Memory available

You can save image data in dynamic RAM (DRAM) or flash memory (FLASH).
Images saved to flash memory are preserved even if the power is turned off, but note that image data saved to dynamic RAM is lost when the power is turned off.

The specifications for each type of memory are as follows.

Memory	Number of images held	Data writing time	Data reading time
Dynamic RAM	20 images	0.5 seconds	0.5 seconds
Flash memory	16 images	15 seconds	0.5 seconds

Note that when copying a number of files, the time taken is the time for writing each image multiplied by the number of files being copied.

Functions

You can carry out the following operations using the STILL FILE function.

SAVE: Saving a frozen image from frame memory 1 or frame memory 2
LOAD: Loading a saved image to frame memory 1 or frame memory 2
COPY: Copying a saved image to a different memory location
DELETE: Deleting a saved image from memory (making it unavailable)
NAME: Attaching a name to the image captured in frame memory 1 or frame memory 2
RENAME: Attaching a name to an image saved in memory

You can apply the COPY, DELETE, and RENAME functions to a number of files in a single operation, by specifying a range.

Basic operations in the STILL FILE menu

This section describes basic operations in the STILL FILE menu.

Accessing the STILL FILE menu

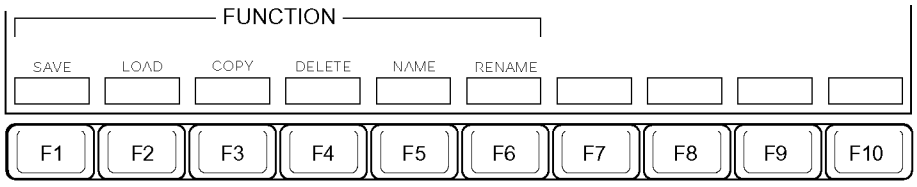
Press the STILL FILE menu button in the SYSTEM row of the menu control block.

Writing and recalling images

Use the following procedure to write (save) and recall (load) images in frame memory.

1 In the STILL FILE menu, select item 1 (FILE).

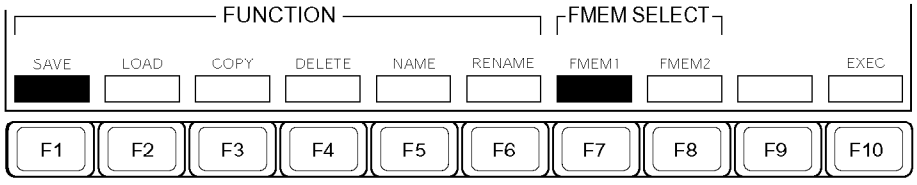
The FILE menu appears.



Function key indications in the FILE menu (1)

2 To save an image press F1 (SAVE), and to load an image press F2 (LOAD).

Function key indications for F7 to F10 now appear.



Function key indications in the FILE menu (2)

(Continued)

3 Select the frame memory to be used for saving or loading.

F7 (FMEM1): Frame memory 1
F8 (FMEM2): Frame memory 2

4 Enter the file number for the save or load, using the numeric keypad, and press the ENTER button.

5 Press the F10 (EXEC) button.

- If in step **2** you pressed F1 (SAVE), the menu screen changes so that you can enter a file name. In this case, skip to step **7**.
- If in step **2** you pressed F2 (LOAD), the function key indications change to F9 (YES) and F10 (NO). In this case, continue to step **6**.

6 To execute, press F9 (YES).

To cancel the operation, press F10 (NO).

7 Using the keyboard that appears on the screen and the numeric keypad, enter a name of up to eight characters, then press F9 (ENTER) or the ENTER button on the numeric keypad to confirm the name. If you do not need to change the name, simply press F9 (ENTER) or the ENTER button on the numeric keypad.

For details of name entry, see page 3-11.

Note

A load operation is only possible if the frame memory mode is set to MANUAL or PAINT. In other modes a load operation is inhibited.

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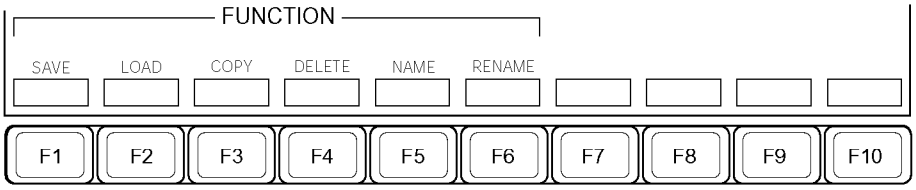
Operations on files

Use the following procedure to copy, delete, or rename files which have been saved.

1 In the STILL FILE menu, select item 1 (FILE).

The FILE menu appears.

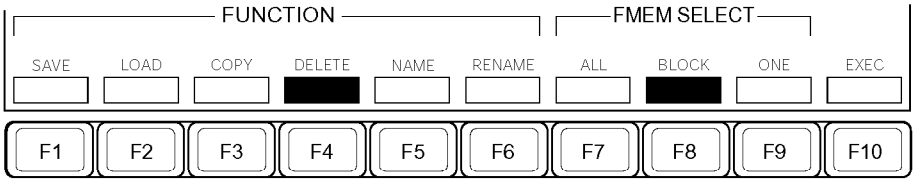


Function key indications in the FILE menu (1)

2 Press one of F3 to F6, turning it to reverse video, to select the operation.

F3 (COPY): To copy files
F4 (DELETE): To delete files
F6 (RENAME): To rename files

Function key indications for F7 to F10 now appear. (If you pressed F3 (COPY), the indication for F7 (ALL) does not appear.)



Function key indications in the FILE menu (3)

(Continued)

3 Press one of F7 to F9, turning it to reverse video, to select the method of specifying files.

F7 (ALL): To specify all files
F8 (BLOCK): To specify a range of consecutive file numbers
F9 (ONE): To specify a single file

If you pressed F7 (ALL), skip to step **6**.

4 Enter a file number from the numeric keypad, and press the ENTER button.

If you selected F8 (BLOCK) in step **3**, enter the first file number from the numeric keypad, then enter the last file number.

5 Press the F10 (EXEC) button.

- If you pressed F6 (RENAME) in step **2**, the menu screen changes so that you can enter a file name. In this case, skip to step **7**.
- In other cases, the function key indications change to F9 (YES) and F10 (NO). In this case, continue to step **6**.

6 To execute, press F9 (YES).

To cancel the operation, press F10 (NO).

7 Using the keyboard that appears on the screen and the numeric keypad, enter a name of up to eight characters, then press F9 (ENTER) or the ENTER button on the numeric keypad to confirm the name.

If you pressed F7 (ALL) in step **3**, this renames all of the files to the same name; if you pressed F8 (BLOCK), all of the files in the specified range are given the same name.

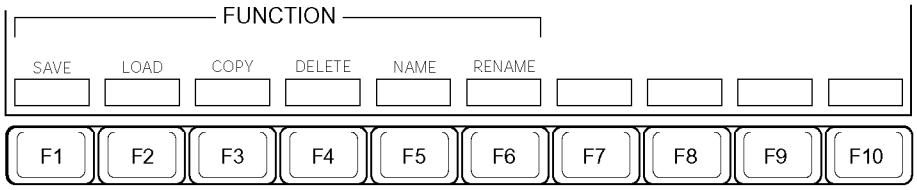
For details of name entry, see page 3-11.

Applying a name to an image frozen in frame memory

To apply a name to the image frozen in frame memory 1 or frame memory 2, use the following procedure.

1 In the STILL FILE menu, select item 1 (FILE).

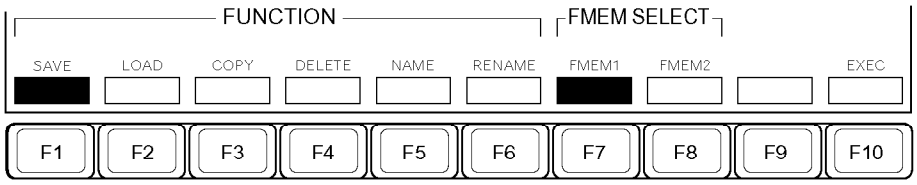
The FILE menu appears.



Function key indications in the FILE menu (1)

2 Press F5 (NAME).

Function key indications for F7 to F10 now appear.



Function key indications in the FILE menu (4)

3 Select the frame memory to which you want to apply the name.

F7 (FMEM1): Frame memory 1
F8 (FMEM2): Frame memory 2

4 Press the F10 (EXEC) button.

The menu screen changes so that you can enter a file name.

(Continued)

5 Using the keyboard that appears on the screen and the numeric keypad, enter a name of up to eight characters, then press F9 (ENTER) or the ENTER button on the numeric keypad to confirm the name.

For details of name entry, see page 3-11.

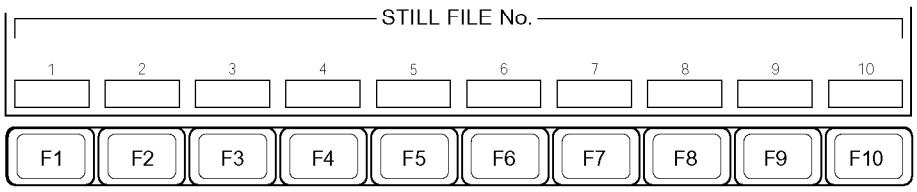
QUICK LOADER operation

You can recall a saved image with a simple operation. This function is called "QUICK LOADER", and you use it as follows.

1 In the STILL FILE menu, to recall to frame memory 1 select item 2 (QUICK LOAD 1), and to recall to frame memory 2 select item 3 (QUICK LOAD 2).

Each time you press the item selection button, the function key indications change as follows, cycling through the file numbers to be recalled.
1 to 10 →11 to 20 →21 to 30 →31 to 36

The QUICK LOADER menu appears.



Function key indications in the QUICK LOADER menu (for file numbers 1 to 10)

2 Press the function key for the file number you want to recall.

Note on snapshots and key frame effect operations

By a snapshot or key frame effect operation, you can recall an image saved in a file to frame memory 1 or frame memory 2.

For snapshots

- When you save frame memory 1 or frame memory 2 in a snapshot, the file number of the image in the frame memory is also automatically saved.
- When you recall a snapshot of frame memory 1 or frame memory 2, the image with the file number saved in the snapshot is recalled to frame memory.

For key frame effects

- When you insert frame memory 1 or frame memory 2 in a key frame, the file number of the image in the frame memory is also automatically inserted in the key frame.
- When you recall the effect, the image with the file number inserted in the key frame is recalled to frame memory.

Note

It is not possible to recall images to frame memory 1 and frame memory 2 simultaneously. The images are recalled first to frame memory 1, and then to frame memory 2, and the process takes a total of about 0.5 seconds. This must be taken into consideration when making key frame duration and similar settings.

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Menus accessed from the SYSTEM menu (Continued)

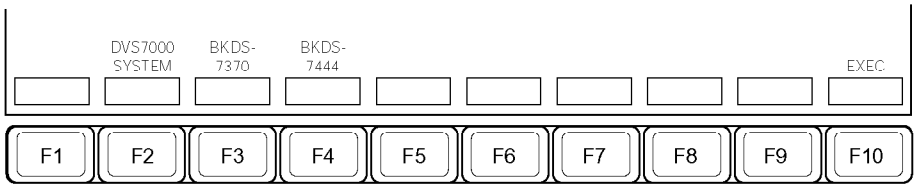
Menu	Functions	Function key	See page
SYSTEM CONFIGU-RATION	• Setting the system configuration • Setting the DMK-7000 configuration • Setting the switcher program output (3M/E system only) • Setting the final bank controlled from the remote panel • Setting the phase relation between the external sync signal input to the switcher and the output signals of the switcher • Making multiple cross-point assignments	F4(SYSTEM CONFIG)	14-10
BACKUP	• Saving the setup data in nonvolatile memory • Making the setup data write-protected or not	F5 (BACKUP)	14-15
INITIALIZE	• Resetting the switcher and control panel to the state at power on • Resetting the DMK-7000 to the state at power on • Clearing the switcher memory and control panel memory and initializing the switcher and control panel based on the default setup data • Clearing the DMK-7000 memory and initializing the DMK-7000 based on the default setup data	F6 (INITIALIZE)	14-17
INFORMATION	Displaying the software version numbers	F7 (INFORMATION)	14-18

Installing software (INSTALL menu)

To install the BZS-7020A operation software, which is supplied on three floppy disks, and the software for option boards, use the following procedure.

1 In the SYSTEM menu, press F10 (INSTALL).

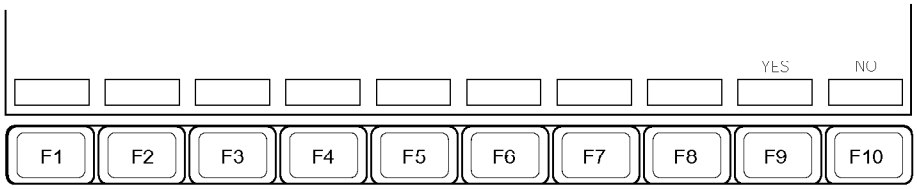
The INSTALL menu appears.



Function key indications in the INSTALL menu

2 Press F2 (DVS7000 SYSTEM), F3 (BKDS-7370) or F4 (BKDS-7444), and F10 (EXEC), in that order.

The function key indications change as follows.



Function key indications in the INSTALL menu (after pressing F10)

3 To carry out the software installation, press F9 (YES), and to cancel the installation press F10 (NO).

If you press F9 (YES), carry out the installation following the messages on the screen.

4 If you installed the software for option boards, after installation press F10 (EXEC).

In a 3-M/E system, the effect depends on the final M/E setting. For example, if M/E-3 is the final M/E, when you select the M/E1 PVW, M/E2 PVW, or PRESET signal on the EDIT PVW bus, then depending on the signal which is on air, the output signal from the EDIT PVW bus is switched as shown in the following table.

Signal selected on the EDIT PVW bus	Condition	Output signal from the EDIT PVW bus
M/E1 PVW	M/E1 on air	M/E1 PVW
	Not on air	M/E1 PGM
M/E2 PVW	M/E2 on air	M/E2 PVW
	Not on air	M/E2 PGM
PRESET	When the same M/E is selected on the M/E-3 A and B buses	M/E1 PVW, M/E2 PVW
	Other cases	M/E3 PVW

If M/E-1 or M/E-2 is the final M/E, then the above table applies, with the appropriate bank interchanged with M/E-3.

- **Show key function:** When the auto preview 2 function is enabled, if you hold down a keyer selection button in one of the M/E operation sections for at least 1 second, the key signal for that keyer is output for a fixed interval to the EDIT PVW bus. You can set the interval for which the key signal appears, using the KEYER menu.

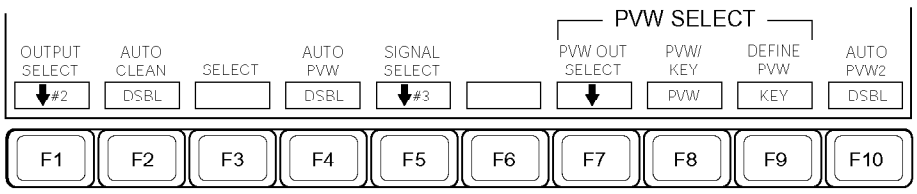
  For details, see the section, "Carrying out setup relating to keyers (KEYER menu)" (page 14-44).

Option To use the show key function requires the BKDS-7280 ME Preview Board.

To carry out these settings, use the following procedure.

1 In the INPUT/OUTPUT menu, press F9 (OUTPUT ASSIGN).

The OUTPUT ASSIGN menu appears.



Function key indications in the OUTPUT ASSIGN menu

(Continued)

2 Carry out the operation in the following table to make the required setting.

Setting	Operation
Output signal selection	Use the following procedure. **1** Press F1 (OUTPUT SELECT), and move the cursor to select the output signal group from SWER CLEAN (switcher clean output), and DMK CLEAN (DMK-7000 clean output). (The list of output signals changes according to the selection.) **2** Press F5 (SIGNAL SELECT), and move the cursor to select the output signal from the list. **3** Press F3 (SELECT), to confirm the selection of the output signal.
Switching the preview output for a switcher M/E bank or DSK 1 to 4	Use the following procedure. **1** Press F7 (PVW OUT SELECT), and move the cursor to select the PVW output, to which the subsequent setting applies, from among M/E-1 to M/E-3 and DSK1 to DSK4. **2** Press F8 (PVW/KEY). This cycles the setting through PVW, KEY, and CLEAN for the M/E, or toggles between PVW and KEY for the DSK.
Defining the PVW output of a switcher	Use the following procedure. **1** Press F7 (PVW OUT SELECT), and move the cursor to select the PVW output, to which the subsequent setting applies, from among M/E-1 to M/E-3 and DSK1 to DSK4. **2** Press F9 (DEFINE PVW). This toggles between L-PVW and K-PVW for the M/E, or cycles the setting through L-PVW, K-PVW, and F-PVW for the DSK.
Setting the auto clean function	Press F2 (AUTO CLEAN) to toggle between ENBL and DSBL. ENBL: The auto clean function is enabled. DSBL: The auto clean function is disabled.
Auto preview setting	Press F4 (AUTO PVW), to toggle between “ENBL” and “DSBL”. ENBL: The auto preview function is enabled. DSBL: The auto preview function is disabled.
Setting the auto preview 2 function	Press F10 (AUTO PVW2) to toggle between ENBL and DSBL. ENBL: The auto preview 2 function is enabled. DSBL: The auto preview 2 function is disabled.

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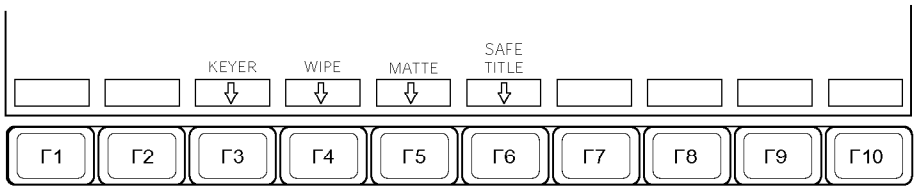
Setup Relating to Keyers, Wipes and Other Effects (EFFECT Menu)

To carry out setup operations relating to keyers, wipes and other effects, access the EFFECT menu.

Accessing the EFFECT menu

In the SETUP menu, select item 3 (EFFECT).
The EFFECT menu appears.



Function key indications in the EFFECT menu

Selecting the next menu

When you have displayed the EFFECT menu, access the next menu according to the data item you wish to set.
The menus you can access from the EFFECT menu are listed in the following table, together with their functions, and the function keys you need to press to access them.

Menus accessed from the EFFECT menu

Menu	Functions	Function key	See page
KEYER	Making the following settings relating to keyers. • Toggling the key memory function on and off • Saving default values of clip, gain and density for individual keyers • Toggling the chroma key memory on or off, and making chroma key memory settings • Determining which to carry out first, masking or border processing.	F3 (KEYER)	14-44
WIPE	Making the following settings relating to wipes. • Adjusting the wipe pattern center position • Adjusting the softness of the wipe edge	F4 (WIPE)	14-46
MATTE	Making the following settings relating to matte generators. • Toggling the illegal color limiter function on and off • Setting the luminance level maximum value • Setting the luminance level minimum value	F5 (MATTE)	14-47
SAFE TITLE	Making the following settings relating to the safe title function. • Selecting an output to which to add a safe title. • Toggling the safe title box on and off • Toggling the safe title cross on and off	F6 (SAFE TITLE)	14-48

Carrying out setup relating to keyers (KEYER menu)

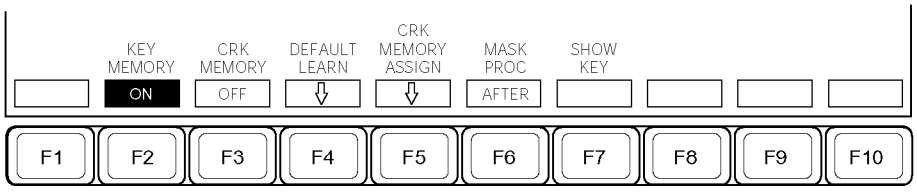
You can use the KEYER menu for the following settings.

- **Toggling the key memory function on and off**
- **Saving default values of clip, gain and density for individual keyers**
- **Toggling the chroma key memory function on and off**
- **Setting input signals for the six chroma key memories**
- **Determining which to carry out first, masking or border processing:** Determine whether to carry out masking after border processing (factory default setting) or before border processing.
- **Setting the display time for the key signal when using the show key function:** For details of the show key function, see page 14-41.

To carry out these settings, use the following procedure.

1 In the EFFECT menu, press F3 (KEYER).

The KEYER menu appears.



Function key indications in the KEYER menu

2 Carry out the operation in the following table to make the required setting.

Setting	Operation
Toggling the key memory function on and off	Press F2 (KEY MEMORY). This toggles the setting on and off.
Saving default values of clip, gain and density	Use the following procedure. **1** Press F4(DEFAULT LEARN) to display the function key indications for saving default values. **2** According to the keyer for which you wish to save default values, press one of F1 (M/E-1 KEY1) to F10 (DSK4). The current settings on the selected keyer are saved as the default values.
Toggling the chroma key memory on and off	Press F3 (CRK MEMORY). This toggles the setting on and off.

(Continued)

Setting	Operation
Making the chroma key memory settings	Use the following procedure. **1** Press F5 (CRK MEMORY ASSIGN), to display the CHROMA KEY MEMORY ASSIGN menu. **2** Either press F1 (MEMORY SELECT) or turn control knob 2 to align the cursor with one of the six chroma key memories. **3** To assign one of the chroma key analog component inputs 1 to 4 as the chroma key memory, press the corresponding one of function keys F4 (1) to F7 (4). To assign an input signal assigned to the key bus in a D1 system, hold down F8 (KEY BUS) and press the corresponding cross-point button in the auxiliary bus bank, or hold down F8 and turn control knob 3 to select the input signal. To assign nothing, press F3 (OFF).
Determining whether to carry out masking after or before border processing	Press F6 (MASK PROC). This toggles the setting between AFTER and BEFORE.
Setting the display time for the key signal when using the show key function	Press F7 (SHOW KEY), turning it to reverse video, then adjust knob 4 to set the key signal display time.

Carrying out setup relating to wipes (WIPE menu)

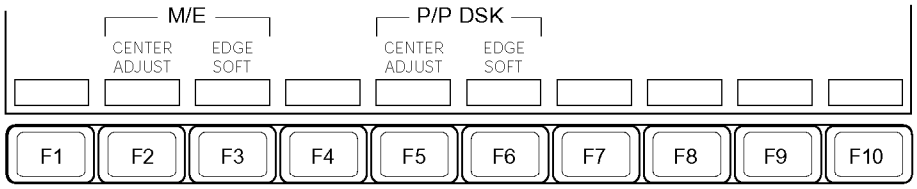
You can use the WIPE menu for the following settings.

- **Adjusting the wipe pattern center position:** For the three types of wipe listed below, you can adjust the center position of the wipe pattern horizontally and vertically in the range –15.0 to +15.0 pixels.
  M/E wipes
  PGM/PST wipes (3.5-M/E systems only)
  Downstream key wipes (3.5-M/E systems and 3-M/E systems equipped with a downstream keyer only)
- **Adjusting the softness of the wipe edge:** For the above three types of wipe, you can adjust the softness of the wipe edge in the range –50.00 to +50.00%.

To carry out these settings, use the following procedure.

1 In the EFFECT menu, press F4 (WIPE).

The WIPE menu appears.



Function key indications in the WIPE menu

2 Carry out the operation in the following table to make the required setting.

Setting	Operation
Adjusting an M/E wipe pattern center position	Press F2 (CENTER ADJUST), turning it to reverse video, and adjust the horizontal position with control knob 3 and the vertical position with control knob 4.
Adjusting a PGM/PST or downstream keyer wipe pattern center position	Press F5 (CENTER ADJUST), turning it to reverse video, and adjust the horizontal position with control knob 3 and the vertical position with control knob 4.
Adjusting the softness of an M/E wipe edge	Press F3 (EDGE SOFT), turning it to reverse video, and adjust with control knob 4.
Adjusting the softness of a PGM/PST or downstream keyer wipe edge	Press F6 (EDGE SOFT), turning it to reverse video, and adjust with control knob 4.

5 Press F4 (FIELD) to select the GPI trigger output timing.

Pressing this button cycles through the settings: ANY (arbitrary timing), F1 (first field), and F2 (second field).

6 Press F9 (ACTION SELECT) or turn control knob 3 to align the cursor with the desired action causing the GPI output.

7 Press F7 (SELECT) to confirm the selection of the action causing the GPI output.

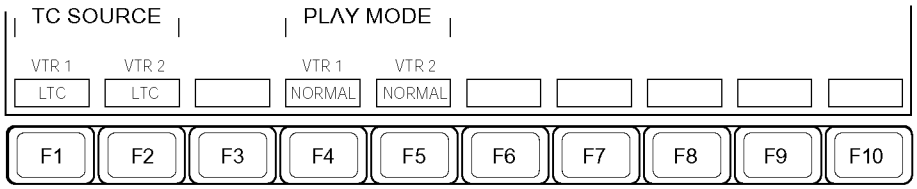
8 Repeat steps **2** to **7** to make the settings for the other output ports.

Setting the VTR control time code

To set the VTR control time code used in the control panel, use the following procedure.

1 In the PANEL PORT ASSIGN menu, press F2 (VTR IF).

The VTR INTERFACE menu appears.



Function key indications in the VTR INTERFACE menu

2 Press F1 for VTR1 or F2 for VTR2.

The selection cycles through LTC, VITC, L/VI (LTC/VITC) and CTL.

To set the VTR program play mode

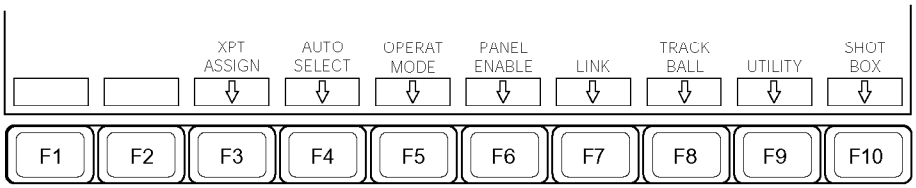
You can play back at a preset speed.
To set the playback speed, in the VTR INTERFACE menu, for VTR1 press F4, and for VTR2 press F5, setting the indication to "PGM". Set the speed with knob 4.
You can set the playback speed in the range approximately ±20% of standard playback speed.

Setup Relating to Operations From the Control Panel (OPERATION Menu)

To carry out setup operations relating to operations from the control panel, access the OPERATION menu.

Accessing the OPERATION menu

In the SETUP menu, select item 5 (OPERATION).
The OPERATION menu appears.



Function key indications in the OPERATION menu

Selecting the next menu

When you have displayed the OPERATION menu, access the next menu according to the data item you wish to set.
The menus you can access from the OPERATION menu are listed in the following table, together with their functions, and the function keys you need to press to access them.

Menus accessed from the OPERATION menu

Menu	Functions	Function key	See page
XPT ASSIGN	Making the following settings relating to assigning an input signal to a cross-point button • Input signal assignment • Allocating a name to an input signal	F3 (XPT ASSIGN)	14-68
AUTO SELECT ASSIGN	Allocating a key source signal to a key fill	F4 (AUTO SELECT)	14-72
OPERATION MODE	• Setting the background transition flip-flop mode • Setting the downstream keyer auto drop function • Setting the cross-point button shift function • Setting the cross-point shift button lock/unlock function • Settings relating to key frame operations • Setting the programmable button function • Setting custom modes	F5 (OPERAT MODE)	14-73

(Continued)

- **Setting custom modes:** You can make the following custom settings for the operating mode of parts of the control panel.

  a) **Switching the operating mode of the FlexiPad:** You can switch the operating mode of the FlexiPad in each of the M/E banks.
  MODE1: Factory default operating mode. *For details see page 7-10.*
  MODE2: This changes the operation of snapshot recall as follows.

  To specify register numbers 1 to 9

  1 Press the SNAPSHOT button, which lights amber.

  2 Press one of the numeric keys 1 to 9.

  To specify register numbers 10 to 19

  1 Press the SNAPSHOT button, which lights amber.

  2 Press the SHIFT button, which lights amber.

  3 Press one of the numeric keys 0 to 9; the SHIFT button goes off.

  To specify register numbers 20 to 99

  1 Press the SNAPSHOT button, which lights amber.

  2 Hold down the SHIFT button, and press the 2 numeric key; the SHIFT button lights green.

  3 Press one of the numeric keys 0 to 9.

  4 To subsequently specify another register in the range 20 to 29, with the SHIFT button lit green, press one of the numeric keys 0 to 9 again.

  In step **2**, press 3 to 9 in place of 2 in order to specify a register in the range 30 to 99.
  To return to the state in which one of registers 1 to 19 can be specified, press the SHIFT button lit green, turning it off.

MODE3: The following procedure shows how to specify a register from 10 to 19. Other operations are the same as for MODE2.

To specify a register from 10 to 19

1. Press the SNAPSHOT button, which lights amber.
2. Press the SHIFT button, which lights amber.
3. Press the desired key from "0" to "9". The SHIFT button lights.

b) Setting the linkage of the transition type selection buttons and the FlexiPad: Select whether or not pressing one of the WIPE, DME1, and DME2 transition type selection buttons in the transition control section of an M/E bank causes the WIPE button or DME button in the FlexiPad of the same M/E bank to light automatically.
MODE1: Lights automatically. (Factory default setting)
MODE2: Does not light.

c) Setting the method of selecting the reference channel in the numeric keypad section: Select the method of making the corresponding sub-register selection button light green when selecting the reference channel in the numeric keypad section.
MODE1: Hold down the SNAPSHOT button or EFF button, and press the corresponding sub-register selection button to cause it to light green. (Factory default setting)
MODE2: Press a sub-register selection button which is off or lit amber to select the corresponding sub-register as the reference channel. To cancel the reference channel selection, press the button lit green, turning it off.

d) Setting the linkage between snapshot recall from the numeric keypad section and the FlexiPad: After a snapshot has been recalled using the numeric keypad section, select whether or not the register number selection is reflected in the FlexiPad of the corresponding M/E bank.
MODE1: Not reflected. (Factory default setting)
MODE2: Reflected.

e) Making the settings relating to the lighting of buttons when the same signal is assigned to more than one cross-point button:
Select the mode of button lighting to be used when one of the buttons to which the same signal has been assigned is pressed.
MODE1: Of the buttons to which the same signal has been assigned, only the button of the smallest number lights. (Factory default setting)
MODE2: All the buttons to which the same signal has been assigned light.

f) LAST X function setting for FlexiPad snapshot recall: Select whether or not to disable the LAST X function, activated on each of the M/E banks, when using the FlexiPad to recall a snapshot, by entering 00 then pressing.
ENBL: Enable the "LAST X" function. (Factory default setting)
DSBL: Disable the "LAST X" function.

g) Fader lever operation settings: Select the way in which the lever position and the progress of the transition are related.
MODE1: The transition progression is linear, according to the position of the lever. (Factory default setting)
MODE2: The lever position and the transition progression are related by an S-curve. The transition is more gradual when the lever is close to the end of its travel.

h) Setting for bus tally indicator operation: Select whether the bus tally indicator at the right hand end of each bus is used as a bus tally or as an indicator for the video process function.
TALLY: Use as a bus tally.
V-PROC: Use as an indicator for the video process function. That is to say, the bus tally indicator lights when video processing for the signal selected on this bus is on.

i) Setting for the LAST X button in the numeric keypad section:
Select whether to enable or disable the LAST X function.
ENBL: Enable the LAST X function. (Factory default setting)
DSBL: Disable the LAST X function.

j) Settings for manipulating the snapshot attributes in the Flexipad section

This changes the method of operation of the EFF DISS button and the AUTO TRANS button in the Flexipad for each M/E bank, for manipulating the snapshot attributes.

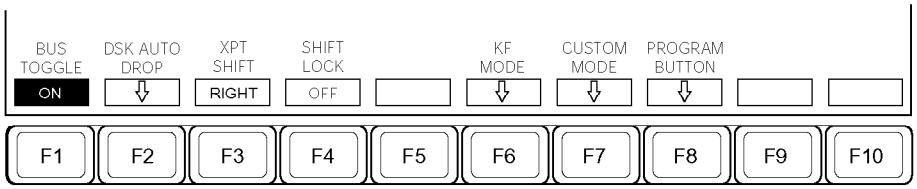
MODE1: This is used when saving snapshot attributes. The attributes of the button which is lit are applied to the register.

MODE2: This is used when recalling snapshot attributes. When a register is recalled, the snapshot is recalled according to the attributes of the button which is lit. When a register is recalled when the button is not lit, the snapshot is recalled with the attributes attached to the register.

To carry out these settings, use the following procedure.

1 In the OPERATION menu, press F5 (OPERAT MODE).

The OPERATION MODE menu appears.



Function key indications in the OPERATION MODE menu

2 Carry out the operation in the following table to make the required setting.

Setting	Operation
Setting the background transition flip-flop mode	Press F1 (BUS TOGGLE). This toggles the setting between ON and OFF.
Setting the downstream keyer auto drop function	Carry out the following procedure. **1** Press F2 (DSK AUTO DROP). The DSK AUTO DROP menu appears. **2** Press one of F1 (DSK1) to F4 (DSK4) according to the downstream keyer to which the setting applies. Pressing the button toggles the auto drop function on and off.
Setting the cross-point button shift function	Press F3 (XPT SHIFT). This cycles the setting through OFF, RIGHT and LEFT.

(Continued)

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Setting	Operation
Setting the cross-point shift button lock/unlock function	Press F4 (SHIFT LOCK). This cycles the setting through OFF, ON and HOLD.
Settings for key frame operations	Carry out the following procedure. **1** Press F6 (KF MODE). The KEY FRAME MODE menu appears. **2** Press F1 (AUTO SAVE) or F2 (EDIT ENABLE AT OFF). This toggles the setting between ENBL and DSBL.
Setting custom modes	Skip to step **3**.
Setting the programmable button function (for other than the ALL button in the numeric keypad section)	Carry out the following procedure. **1** Press F8 (PROGRAM BUTTON). The PROGRAMMABLE BUTTON menu appears. **2** Hold down F1 (PROGRAM BUTTON), and from the flashing programmable buttons, press the desired one. The selected button name in the list on the screen changes to reverse video. **3** Either press F8 (FUNC SELECT) or turn control knob 3 to align the cursor with the desired function from the list. **4** Press F6 (SELECT). This assigns the function selected in step **3** to the button selected in step **2**.
Setting the function of the ALL button in the numeric keypad section	Carry out the following procedure. **1** Press F8 (PROGRAM BUTTON). The PROGRAMMABLE BUTTON menu appears. **2** Press F10 (DEFINE ALL). The ALL BUTTON DEFINE menu appears. **3** Press F1 (SELECT) and align the cursor with the block that contains the desired button. Depending on the selected block, the button names that can be assigned to other function keys than F1 appear. **4** Press the function keys as required to highlight the function key indications for the required functions while not highlighting the function key indications for the functions not required.

(Continued)

3 Press F7 (CUSTOM MODE).

The CUSTOM MODE menu appears.

4 Carry out the operation shown in the following table corresponding to the desired setting.

Setting	Operation
Setting the operating mode for the FlexiPad	Press F1 (FLX PAD MODE). This cycles the setting through MODE1, MODE2, and MODE3.
Setting the linkage between the transition type selection buttons and the FlexiPad	Press F2 (FLX PAD AUTO SELECT). This toggles the setting between MODE1 and MODE2.
Setting the method of reference channel selection using the numeric keypad section	Press F3 (REF SEL MODE). This toggles the setting between MODE1 and MODE2.
Setting the linkage between snapshot recall from the numeric keypad section and the FlexiPad	Press F4 (SS RECALL MODE). This toggles the setting between MODE1 and MODE2.
Making the settings relating to the lighting of buttons when the same signal is assigned to more than one cross-point button	Press F5 (XPT TALLY). This toggles the setting between MODE1 and MODE2.
Setting for the FlexiPad snapshot recall LAST X function	Press F6 (FLX PAD SS LASTX). This toggles the setting between ENBL and DSBL.
Setting for the fader lever operation	Press F7 (FADER CURVE). This toggles the setting between MODE1 and MODE2.
Setting for bus tally indicator operation	Press F8 (BUS TALLY). This toggles the setting between TALLY and V-PROC.
Setting for the LAST X button in the numeric keypad section	Press F9 (KEY PAD LAST X). This toggles the setting between ENBL and DSBL.
Setting for manipulating snapshot attributes with the Flexipad	Press F10 (MORE), then press F1 (FIX PAD ATRIB MODE). This toggles the setting between MODE1 and MODE2.

Appendixes

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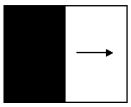
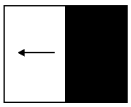
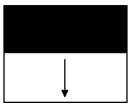
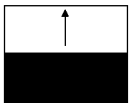
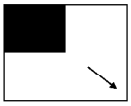
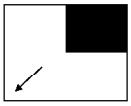
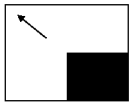
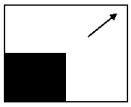
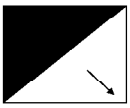
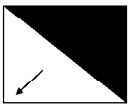
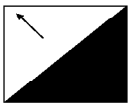
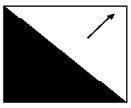
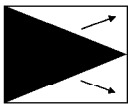
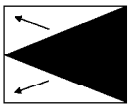
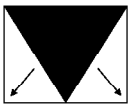
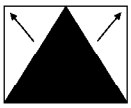
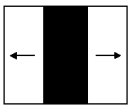
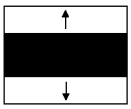
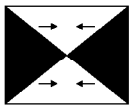
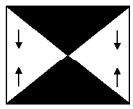
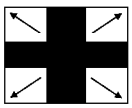
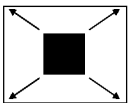
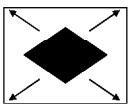
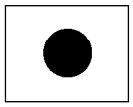
Wipe Patterns

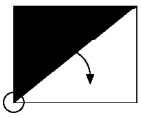
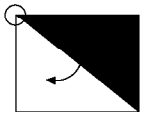
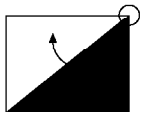
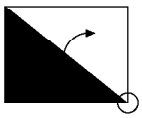
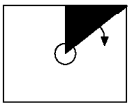
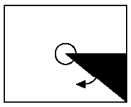
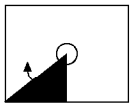
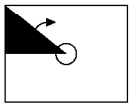
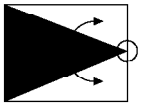
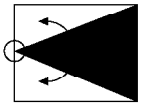
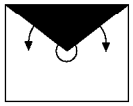
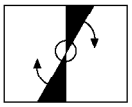
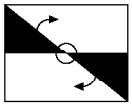
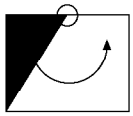
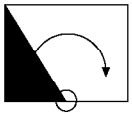
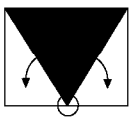
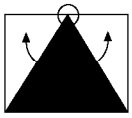
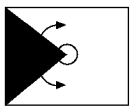
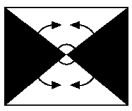
Standard Wipes

1		2		3		4	
5		6		7		8	
9		10		11		12	
13		14		15		16	
17		18		19		20	
22							

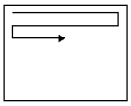
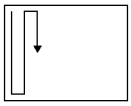
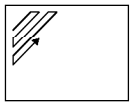
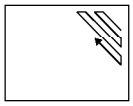
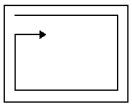
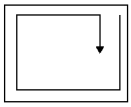
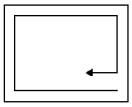
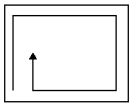
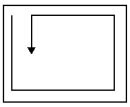
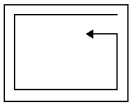
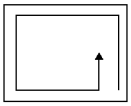
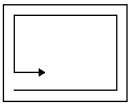
Enhanced Wipes

21		23		24		26	
27		29		49	POLYGON	300	
301		302		303		304	

Rotary Wipes

100		101		102		103	
104		105		106		107	
150		151		156		158	
160		162		516		518	
604		606		624		661	

Mosaic Wipes

200		201		202		203	
206		207		208		209	
210		211		212		213	
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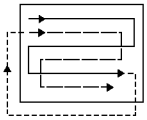
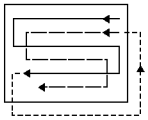
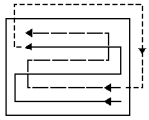
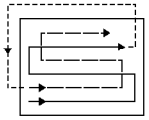
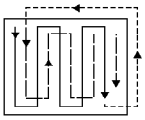
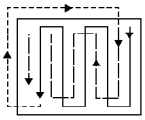
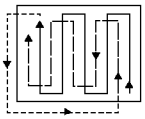
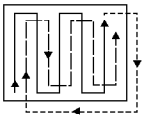
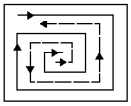
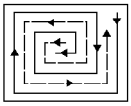
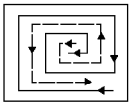
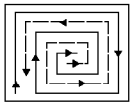
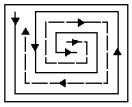
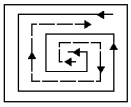
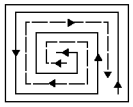
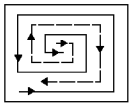
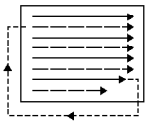
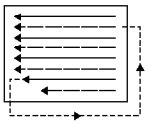
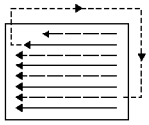
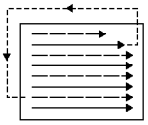
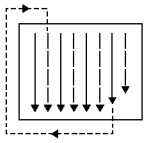
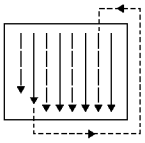
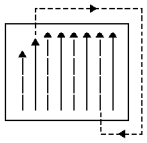
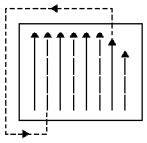
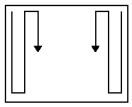
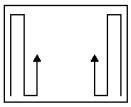
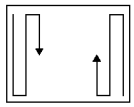
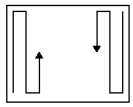
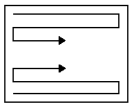
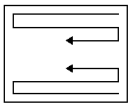
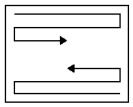
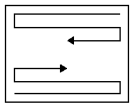
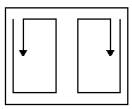
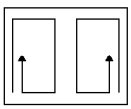
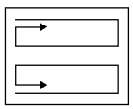
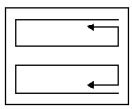
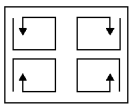
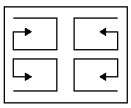
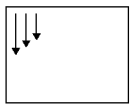
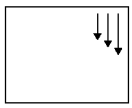
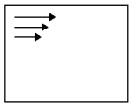
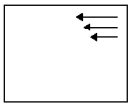
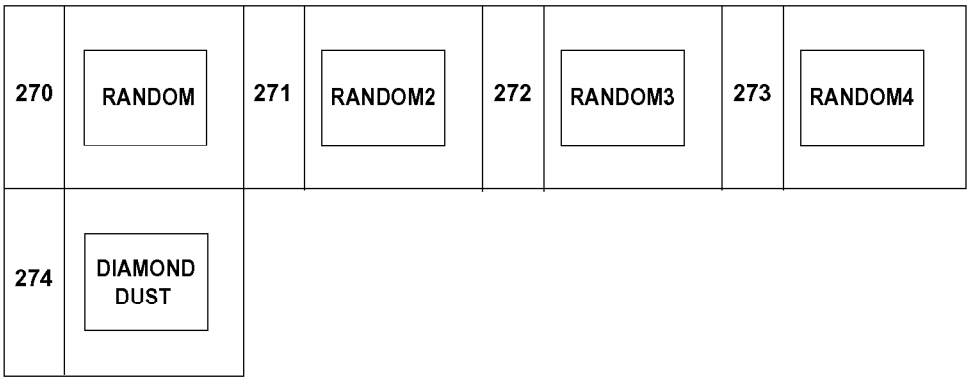
224		225		226		227	
228		229		230		231	
232		233		234		235	

Wipe Patterns

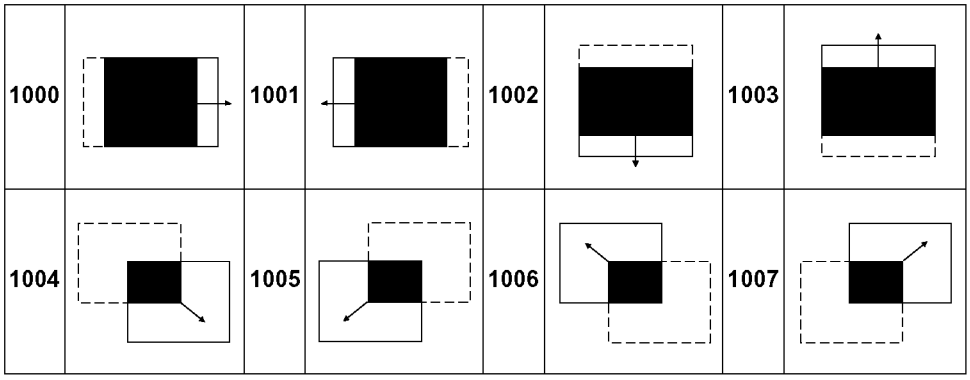
236		237		238		239	
240		241		242		243	
244		245		246		247	
250		251		252		253	
254		255		256		257	
260		261		262		263	
264		265		266		267	
268		269					

Random/dust Wipes

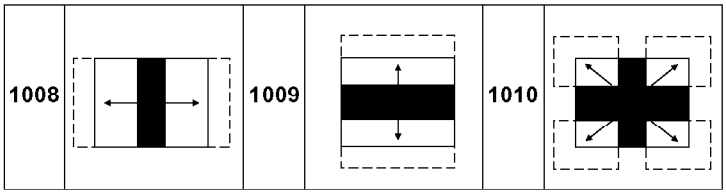


DME Wipe Patterns

Slide



Split



Squeeze